

## USING STRANDED COPPER WIRE

The diagram illustrates a dual loop detector system installed in a road. It features two square loops, one above and one below a horizontal lane stripe. Traffic flow is indicated by arrows pointing to the right, labeled 'TRAFFIC FLOW'. The top loop is labeled 'DETAIL 'D'' at its top-left corner and '6' x 6' LOOP (TYP)' for its overall size. The bottom loop is labeled 'DETAIL 'D'' at its top-left corner and 'DETAIL 'G'' at its bottom-right corner. A 'LANE STRIPE' is shown between the two loops. 'LEAD-IN WIRE' is shown entering the bottom of the loops from the bottom edge. Various detail callouts are present: 'DETAIL 'A'' at the top-left and bottom-left corners, 'DETAIL 'B'' at the top-right and bottom-right corners, and 'DETAIL 'C'' at the bottom-right corner of the bottom loop. Two notes are provided in boxes: the top note states 'NOTE: ALL 14 AWG COPPER WIRE MUST BE FULLY ENCASED IN SEALANT.', and the bottom note states 'NOTE: ALL DETECTOR LOOPS SHALL BE WOUND IN OPPOSITE DIRECTIONS.' A final note at the bottom right states 'WILL REQUIRE AN ADDITIONAL SAWCUT IF USING 2 AMPLIFIERS (MIN. 6" SEPARATION)'.

TRAFFIC FLOW →

DETAIL 'D'

6' x 6' LOOP (TYP)

NOTE:  
ALL 14 AWG COPPER WIRE  
MUST BE FULLY ENCASED  
IN SEALANT.

DETAIL 'G'

DETAIL 'A'

LANE STRIPE

DETAIL 'D'

DETAIL 'G'

NOTE:  
ALL DETECTOR LOOPS  
SHALL BE WOUND IN  
OPPOSITE DIRECTIONS.

TRAFFIC FLOW →

DETAIL 'A'

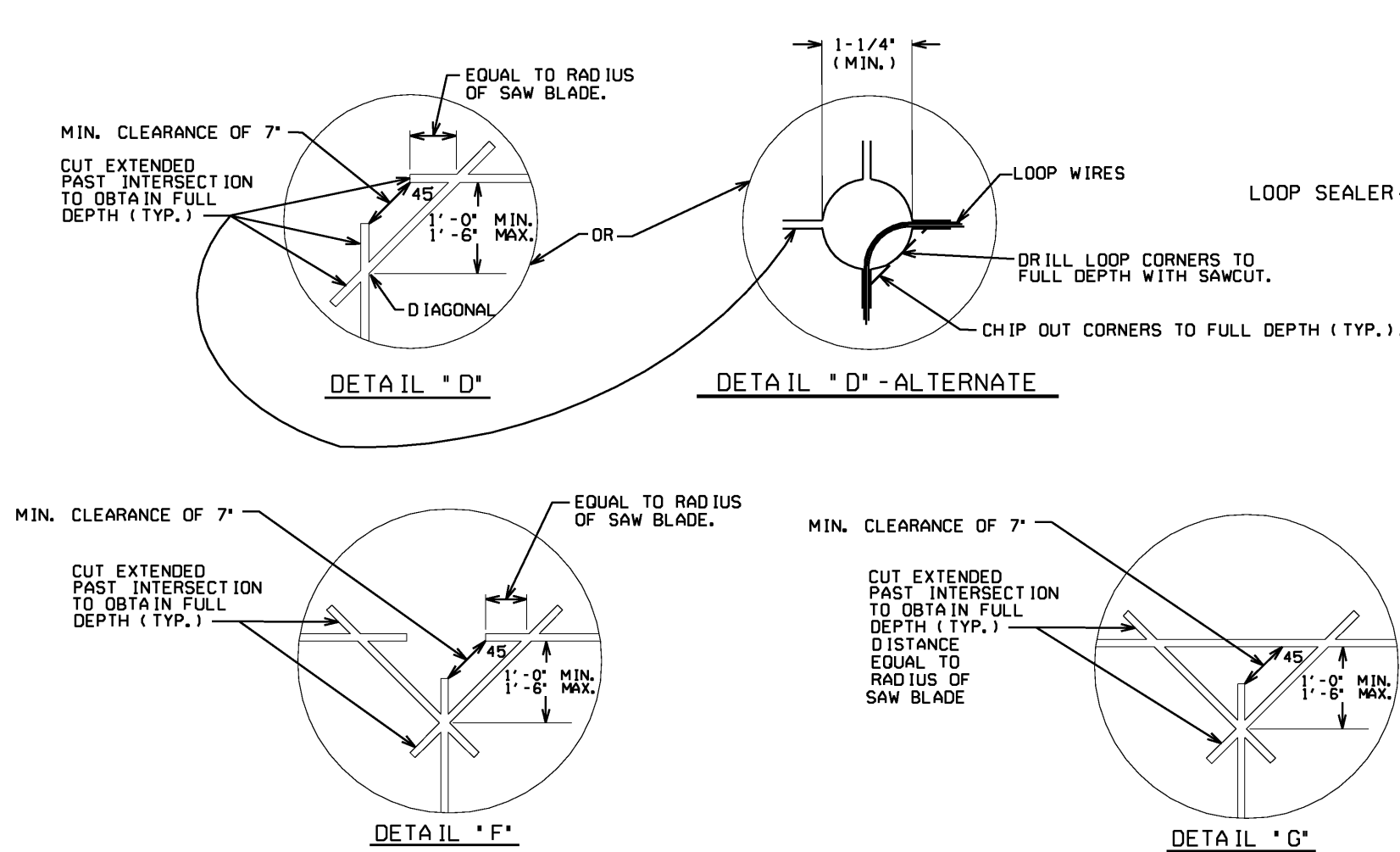
DETAIL 'B'

DETAIL 'C'

ROAD EDGE

LEAD-IN WIRE

WILL REQUIRE AN ADDITIONAL  
SAWCUT IF USING 2 AMPLIFIERS  
(MIN. 6" SEPARATION).



The diagram illustrates a three-lane highway cross-section. The total width of the highway is 6 feet. The lanes are labeled as follows:

- Left Lane:** Labeled "DETAIL 'D'" and "2 WIRE". The length of this lane is indicated as "LENGTH VARIES (SEE PLANS)".
- Middle Lane:** Labeled "DETAIL 'F'" and "4 WIRE".
- Right Lane:** Labeled "DETAIL 'G'" and "2 WIRE".

The diagram also shows "TRAFFIC FLOW" with arrows indicating movement from left to right. A scale bar at the bottom indicates "6'" and "NO SCALE".

THE DOUBLE LAYER CONFIGURATION  
(2-4-2) SHOWN IS A MINIMUM DESIGN  
FOR NORMAL INSTALLATIONS  
WHEN REQUIRED BY THE PLANS.

### Guidelines For Usage On Metric Projects

When these details are incorporated into plans and/or projects that are being prepared or constructed in metric units, exact or precise conversion to metric units is not required. The dimensions shown that are in feet and inches may be converted to corresponding metric units using the following "Rounded-Off" conversion factors: 1"=25mm, 4"=100mm, and 12" or 1'=300mm. All measurement notes that refer to linear feet and square yards shall be interpreted to mean linear meters and square meters.

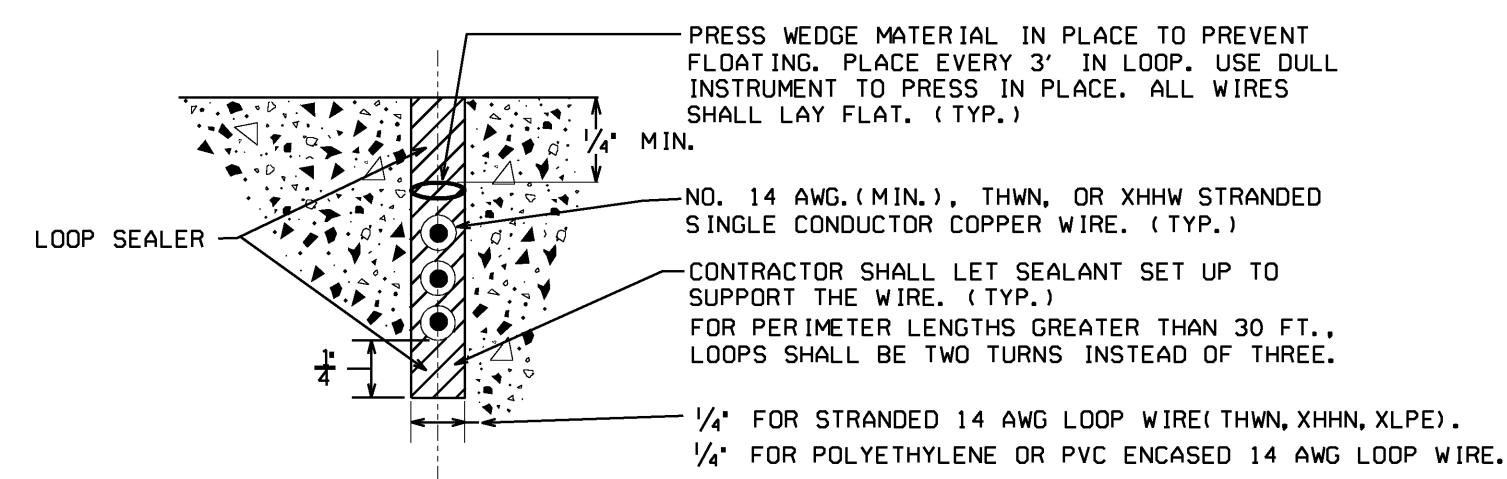
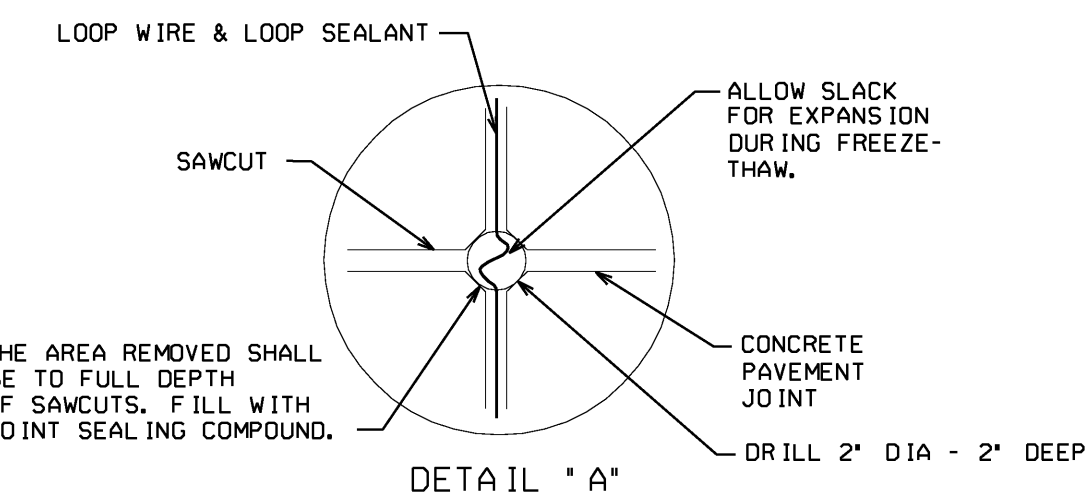
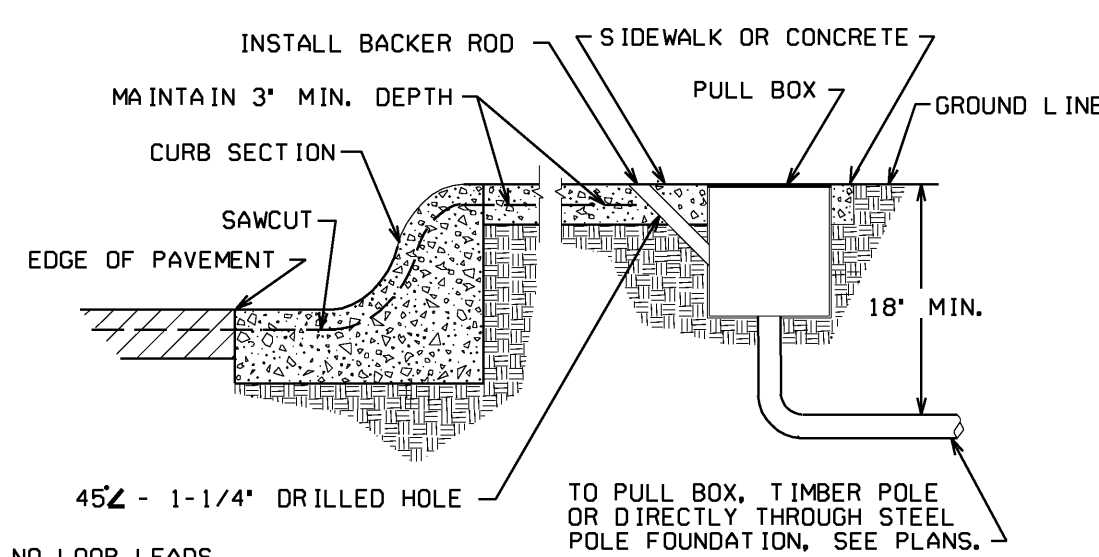


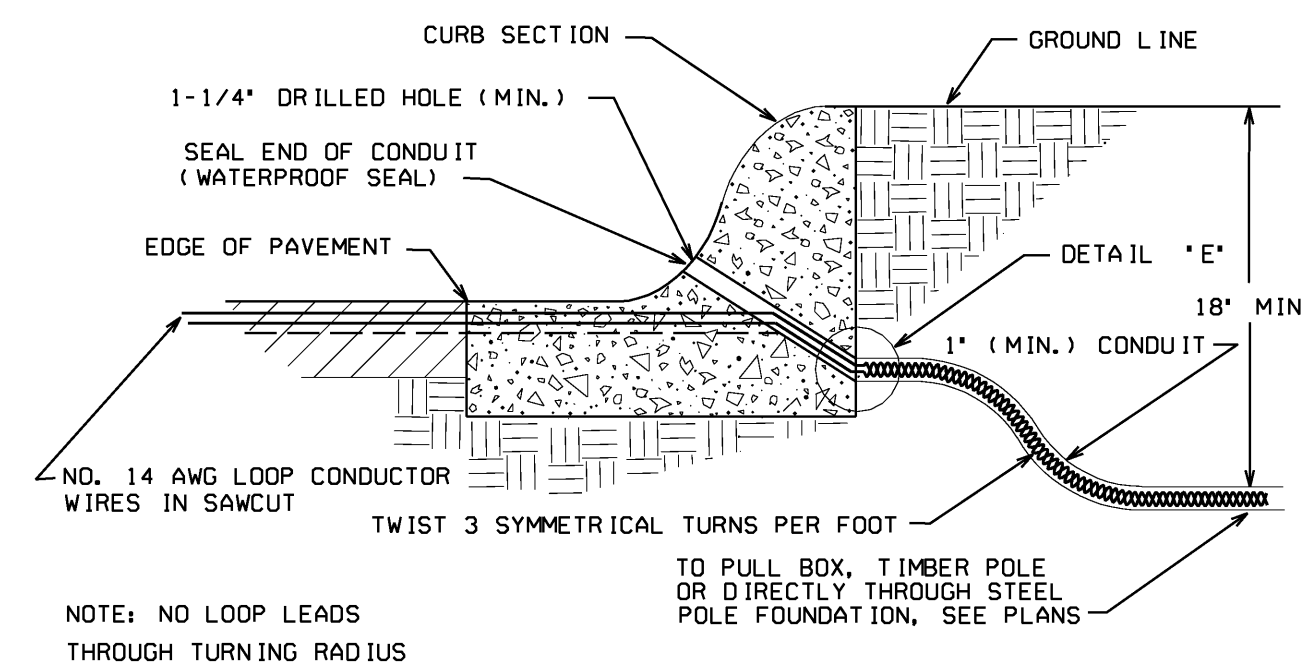
Diagram of Section CC showing a cross-section of a wall and foundation. The wall has a thickness of 3 inches minimum. The foundation has a depth of 1 foot 4 inches. The diagram shows a loop sealer and a section cut. The wall is labeled "WALL" and the foundation is labeled "FOUNDATION". The diagram also shows a "LOOP SEALER" and a "SECTION CUT".



## ( WITH SIDEWALK )



## ( WITHOUT SIDEWALK )



NO. 14 AWG LOOP CONDUCTOR WIRES IN SAWCUT.

EDGE OF PAVEMENT

3" MIN.

4 1/2"

6" MIN.

SEAL END OF CONDUIT (WATERPROOF SEAL)

GROUND LINE

TO PULL BOX, TIMBER POLE OR DIRECTLY THROUGH STEEL POLE FOUNDATION, SEE PLANS.

PAVEMENT

SAWCUT

DETAIL "E"

1" (MIN.) CONDUIT

18" MIN.

TWIST 3 SYMMETRICAL TURNS PER FOOT.

NOTE: NO LOOP LEADS  
THROUGH TURNING RADIUS

[illegible]

HEAT SHRINK TUBING ALTERNATE #1

HEAT SHRINK TUBING

INITIAL SET-UP

1/C # 14 AWG. WIRE

2/C #12 AWG TWISTED, SHIELDED BELDEN CABLE.

SOLDERED SPLICE (MAY USE BUTT CONNECTOR OR WIRE NUT).

EACH SPLICE AND CABLE WRAPPED INDIVIDUALLY.

BUTYL RUBBER TAPE. WRAP ENTIRE SPLICE.

HEAT SHRINK TUBING

BUTYL TAPE EXTENDS BEYOND TUBING.

THWN IN 1/4" O.D. TUBING

SEAL TUBING WITH LIQUID RUBBER

1/C #14 AWG

MULTI PAIR LOOP LEAD-IN CABLE.

1"

1"

1-1/4"

SIMILAR SPLICES

TWIST WIRE, SOLDER AND APPLY WIRE CAPS.

TIE TOGETHER WITH PLASTIC OR NYLON STRING.

NOTE:  
FINISHED SPLICE MUST BE WATERPROOF.

Diagram illustrating the assembly of a cable seal in a pill bottle. The components labeled are:

- SEAL CABLE END COVER SHIELD
- GROUND WIRE
- LIQUID RUBBER AND TAPE.
- FLEXIBLE EPOXY (LOOP SEALANT)
- PILL BOTTLE

						DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
						REVISION DESCRIPTION	TRAFFIC SIGNAL DETAIL <i>INDUCTIVE-LOOP DETECTOR INSTALLATION</i>	
						REV. BY:	<div> <div>APRIL 2010</div> <div>NOT TO SCALE - REPORT ERRORS</div> </div>	DETAIL NUMBER  <div>TS-01</div>